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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,965	08/18/2006	Hiroyuki Sekine	129083	1059

25944 7590 11/26/2010
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EXAMINER

ROST, ANDREW J

ART UNIT	PAPER NUMBER
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3753

NOTIFICATION DATE	DELIVERY MODE
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11/26/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com
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Office Action Summary

Application No.

10/589,965

Applicant(s)

SEKINE, HIROYUKI

Examiner

Andrew J. Rost

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 5, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4, 5, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed 11/5/2010. No claims have been amended. No claims are newly added. Claims 2, 3 and 6-11 have been previously canceled. Presently, claims 1, 4, 5, 12 and 13 are pending.

Response to Arguments

2. Applicant's arguments, see pages 2-4 of the remarks, filed 11/5/2010, with respect to the rejection(s) of claim(s) 1, 4, 5, 12 and 13 under 35 U.S.C. 103(a) as being unpatentable over Ko et al. (5,733,441) in view of Morimoto et al. (5,946,078) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found art references to Grunder et al. (4,023,472) and DuBose (6,436,562).

Interview

3. An interview was conducted on 10/28/2010. During the interview, arguments were presented with respect to the rejection of claims 1, 4, 5, 12 and 13 under 35 U.S.C. 103(a) as being unpatentable over Ko et al. in view of Morimoto et al. with the determination that the claims were not obvious under the rejection made in the Office action dated 8/26/2010.

4. However, during an updated search additional, new prior art was found.

5. Since applicant's arguments were persuasive in overcoming the rejection of the Office action dated 8/26/2010 and new grounds of rejection is being presented, the finality of the Office action dated 8/26/2010 is being withdrawn. The instant Office action is made non-final.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Grunder et al. (4,023,472).

Regarding claims 1 and 5, Grunder et al. disclose a fluid supply device having a flexible portion (flexible line 2), a first filter (microfilter 12) located on an upstream side of the flexible tube (flow lines are indicated in figure 1), a second filter (filter mesh screens 32, 32') located downstream of the flexible tube (figure 1) and a fluid pump (blower 11) that pressurizes the fluid (air) on the upstream side of the system to transmit the fluid to the downstream side wherein the pump (11) is located upstream of the first filter (12) and the flexible tube (2) (figure 1) wherein the filter accuracy of the second filter is lower than a filter accuracy of the first filter. The second filter (32 and 32') have openings measuring preferably 0.08 to 0.1 mm (col. 3, lines 40-48) while the first filter is a microfilter (col. 3, line 20). It is considered that a microfilter filters particles on the

micron scale. Additionally, it is considered that the second filter having openings measuring preferably 0.08 to 0.1 mm (8×10^{-5} m to 1×10^{-4} m) are at least a magnitude larger than the micron scale (1×10^{-6} m). Therefore, it is considered that the filter accuracy of the second filter is less than the filter accuracy of the first filter. Further, it is considered that the second filter would filter any particle larger than the openings in the second filter (larger than 0.08 to 0.1 mm) wherein the particles would need to be formed (i.e., congealed, agglomerated, etc.) between the first filter and the second filter since the first filter would filter any particle larger than the openings in the first filter (larger than a micron since the first filter is a microfilter). Thus any particles that congeal beyond the first filter into particles large enough to be caught by the second filter would be caught by the second filter.

In regards to claim 4, Grunder et al. disclose the flexible tube to have a bellows shape (figure 1).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over DuBose (6,436,562) in view of Grunder et al. (4,023,472).

Regarding claim 12, DuBose discloses a full cell system having a fluid supply device including an air filter (32) and a pump (34) which supplies a reaction gas (air) to a fuel cell (12). DuBose does not disclose the fluid supply device having a first filter upstream a flexible tube, a second filter downstream of the flexible tube, a pump upstream of the first filter and wherein the filter accuracy of the second filter is lower than a filter accuracy of the first filter. However, Grunder et al. teach a fluid supply device having a flexible portion (flexible line 2), a first filter (microfilter 12) located on an upstream side of the flexible tube (flow lines are indicated in figure 1), a second filter (filter mesh screens 32, 32') located downstream of the flexible tube (figure 1) and a fluid pump (blower 11) that pressurizes the fluid (air) on the upstream side of the system to transmit the fluid to the downstream side wherein the pump (11) is located upstream of the first filter (12) and the flexible tube (2) (figure 1) wherein the filter accuracy of the second filter is lower than a filter accuracy of the first filter (the second filter (32 and 32') have openings measuring preferably 0.08 to 0.1 mm (col. 3, lines 40-48) while the first filter is a microfilter (col. 3, line 20)) in order to produce a laminar flow of air (col. 1, lines 19-24). Therefore, it would have been obvious to provide the filter and pump arrangement of the DuBose system with a fluid supply device having a pump upstream of a first filter which is upstream of a flexible tube which is upstream of a second filter as taught by Grunder et al. in order to provide an air filter assembly which would provide an additional level of filtration of the air flow (Grunder et al. teach utilizing at least filter 12, 32 and 32').

In regards to claim 13, DuBose discloses the reaction gas is in a fuel cell gas management system (col. 2, lines 61-63).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Derflinger et al. (6,723,460) disclose a pump being upstream of two filter elements in a fuel cell system. Stenersen et al. (6,783,881) disclose a filter assembly for a fuel cell system wherein a filter is located upstream of second device having a plurality of openings which would function to filter particles larger than the openings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew J. Rost whose telephone number is 571-272-2711. The examiner can normally be reached on 7:00 - 4:30 M-Th and 7:00 - 12:00 Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on 571-272-4913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. J. R./
Examiner, Art Unit 3753

/STEPHEN M HEPPERLE/
Supervisory Patent Examiner, Art
Unit 3753